

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101



REPLY TO
ATTN OF:

Mail Stop 513

MAY 17 1979

Mr. P. B. Norgaard
Atlantic Richfield Company
P.O. Box 360
Anchorage, Alaska 99510

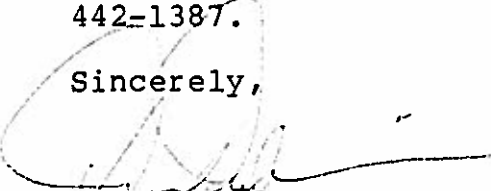
Dear Mr. Norgaard:

We have evaluated your application to modify the production facilities at the Prudhoe Bay oil field in Prudhoe Bay, Alaska, pursuant to the requirements of the federal regulations for the Prevention of Significant Deterioration (PSD). We find that the proposal will employ best available control technology (BACT) and will not cause violations of any known PSD air quality increment or National Ambient Air Quality Standards (NAAQS).

Accordingly, on the basis of the August 2, 1978 PSD permit application and supplementary information submitted on November 7, 1978, EPA hereby grants its approval to Atlantic Richfield Company and SOHIO Petroleum Company to add eleven gas turbines to the Prudhoe Bay oil field complex, subject to the terms and conditions contained in the enclosed permit. Also enclosed is EPA's Final Determination Analysis Document for this project.

If you have any questions regarding the enclosures please feel free to contact Michael Johnston of my staff at (206) 442-1387.

Sincerely,



Donald P. Dubois
Regional Administrator

2 Enclosures

cc: G. N. Nelson, SOHIO, w/o encl

W. P. Metz, ARCO, w/o encl
Bob Chivvis, EPA, AOO w/o encl
D. E. Dias, SOHIO, w/o encl
Tom Hanna, ADEC, w/o encl
Ernst Mueller, Commissioner, ADEC, w/o encl
Rich Biondi, EPA, w/o encl
Mike Trutna, EPA, w/o encl

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8 U.S. ENVIRONMENTAL PROTECTION AGENCY

9 REGION 10

10 SEATTLE, WASHINGTON 98101

11 APPLICATION OF:

12 Atlantic Richfield Company)
13 P. O. Box 360)
14 Anchorage, Alaska 99510)
15 AND)
16 SOHIO Petroleum Company)
Pouch 6-612)
Anchorage, Alaska 99502)

No. PSD-X79-05
APPROVAL OF APPLICATION
TO CONSTRUCT

17 Pursuant to the Agency regulations for the Prevention
18 of Significant Deterioration of Air Quality (PSD) set
19 forth at Title 40, Code of the Federal Regulations, Part
20 52 and based upon information submitted on August 2, 1978
21 and November 7, 1978 by the Atlantic Richfield Company and
22 the SOHIO Petroleum Company, the Regional Administrator
23 now finds as follows:

24 FINDINGS

25 1. The Atlantic Richfield Company and the SOHIO Petroleum
26 Company (hereafter referred to as ARCO/SOHIO) propose to
27 install eleven natural gas fired turbines at the Prudhoe
28 Bay oil field complex, Prudhoe Bay, Alaska.

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32 APPROVAL OF APPLICATION TO CONSTRUCT - Page 1 of 5

1 2. An analysis of projected emissions indicates that this
2 project has the potential to emit more than 250 tons per
3 year of nitrogen oxides (NO_x), hydrocarbons (HC), and
4 carbon monoxide (CO), and is therefore subject to PSD
5 review for those pollutants.

6 3. The proposed modification is located in an area
7 designated as "Class II" under Section 162(b) of the Clean
8 Air Act.

9 4. Modeling analyses of CO, NO_x, and HC have been
10 conducted and demonstrate that while emissions of these
11 pollutants will increase, the modification will not cause
12 any violations of the applicable National Ambient Air
13 Quality Standards or PSD increments so long as the plant
14 is operated in accordance with the conditions specified
15 below. With the application of best available control
16 technology, as required by Section 165(a)(4), operation of
17 the proposed turbines will meet the applicable PSD
18 requirements.

19
20 Accordingly, it is hereby determined that, subject to
21 the conditions set forth below, Atlantic Richfield Company
22 and SOHIO Petroleum Company will be permitted to perform
23 the installation of the turbines to the existing
24 facilities at Prudhoe Bay, Alaska.

25 APPROVAL CONDITIONS

26 1. Emissions of nitrogen oxides (NO_x), hydrocarbon
27 (HC), and carbon monoxide (CO) shall not exceed the
28 following:

<u>POLLUTANT</u>	<u>CONCENTRATION</u>	<u>QUANTITY</u>
NO _x	150 <u>(14.4)</u> Parts per million (ppm) Y (at 15% oxygen)	0.019 tons/yr/HP
HC	42.0 pounds per million cubic feet of gas burned (1b/10 ⁶ CF)	
CO	115.0 1b/10 ⁶ CF	

Y = Manufacturer's rated heat rate at peak load (Kilojoules per watt hour)

2. With the exception of NO_x, HC, and CO, increases in potential emissions of any pollutant regulated under the Clean Air Act resulting from this modification will be less than 250 tons per year.

3. ARCO/SOHIO shall notify Alaska Department of Environmental Conservation (ADEC) of any occurrence of any emissions in excess of limits specified in Condition Numbers 1 and 2 above; such notification shall be forwarded to ADEC in writing in a timely fashion and in each instance no later than ten (10) days from the date of such occurrence. The notification shall include an estimate of the resultant emissions and a narrative report of the cause, duration and steps taken to correct the problem and avoid a recurrence. ARCO/SOHIO shall contemporaneously send a copy of all such reports to EPA.

4. This approval shall become void if on-site construction is not commenced within eighteen (18) months after receipt of the approval or if on-site construction once initially commenced is discontinued for a period of eighteen (18) months.

5. As approved and conditioned by this permit any construction, modification or operation of the proposed facility shall be in accordance with the application

1 which resulted in this permit. Moreover, any such
2 activity which is undertaken by ARCO/SOHIO, or others
3 acting under the direction of ARCO/SOHIO in a manner which
4 is inconsistent with this permit shall subject the
5 Atlantic Richfield Company and the SOHIO Petroleum Company
6 to EPA enforcement activities under the Clean Air Act.
7 6. ARCO/SOHIO shall be subject to Section 114 of the Clean
8 Air Act. Section 114 requirements include but are not
9 limited to:

10 a. Compliance Demonstration:

11 Within 60 days after achieving the maximum
12 production rate at which the turbines will be operated,
13 but not later than 180 days after initial startup of the
14 expansion project, NO_x shall be tested as required under
15 Federal New Source Performance Standards (NSPS) (40 CFR
16 60.335). No compliance testing is required for HC or CO.

17 b. Emission Monitoring:

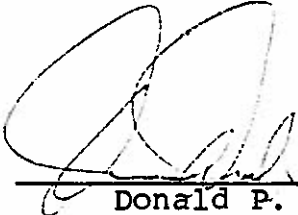
18 In addition to the NSPS monitoring requirements
19 (40 CFR 60.334), a continuous monitoring system shall be
20 installed and operated to measure and record the fuel
21 consumption for each turbine. This system shall be
22 accurate to within \pm 5.0 percent. All fuel consumption
23 records shall be maintained for a period of two years and
24 shall be available for inspection by ADEC and EPA upon
25 request.

26 7. EPA and ADEC shall be notified of the commencement of
27 construction date within thirty (30) days of the date
28 construction begins.

1 Access to the source by EPA or State regulatory
2 personnel will be permitted upon request for the purpose
3 of compliance assurance inspections. Failure to allow
4 such access is grounds for revocation of this permit.

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7 MAY 17 1979

8 Date

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 Donald P. DuBois
 Regional Administrator